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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,956	10/05/2004	Hisao Nakaoka	040434	5061
23850 7590 12/05/2007 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005			EXAMINER CUTLIFF, YATE KAI RENE	
			ART UNIT 1621	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/508,956	Applicant(s) NAKAOKA ET AL.	
	Examiner Yate' K. Cutliff	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 7, 9, 12, 15, 26, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/05/2007, 04/26/2005 & 6/21/2006 .

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In rejected claim 9 recites the limitation "the volatile components" in lines 2-3.

There is insufficient antecedent basis for this limitation in the claim.

3. Claims 4, 6, 7, 12, 15, 26, 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "derivative" in claims, 4, 6, 7, 12, 15, 26, 28 and 29 are is a relative term which renders the claim indefinite. The term "derivative" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The definition and scope of the "derivative" is unclear.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 3 and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Weiczorek et al. (U.S. 6,187,974).

Applicant claims 1-3, inter alia, claim a liquid vegetable unsaturated alcohol mixture having an iodine value of 88 to 100 and a cloud point of less than 7°C.

Rejected claim 16 teaches a liquid vegetable unsaturated alcohol mixture.

Weiczorek et al. discloses an unsaturated fatty alcohol with an iodine number of between 90 and 100. Since the unsaturated fatty alcohol of Weiczorek et al. are of identical chemical composition, and Weiczorek et al. has solidifying points of the unsaturated fatty alcohols being in the range of 5°C and 11°C, it is inherent that fatty alcohols with the stated iodine values would have an identical cloud point to the claimed composition. (see column 5, lines 1-30). "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Applicant is reminded that claims 1 and 16 are in a Product-by-Process format.

The PTO takes the following position: "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious

from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., In re Garnero, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979). "The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. In re Fessmann, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1 - 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiczorek et al. (U.S. 6,187,974), Heck et al. (U.S. 2002/0037932), Heck et al. (U. S. 2002/0035159), and Koehler et al. (U.S. 5,917,097), in view of Masami (JP 2001-89403).

Applicant claims an unsaturated alcohol. See the brief description in the 102(b) rejection. Further, the rejected claim uses the product in the derivatives set out in rejected claim 5.

Weiczorek et al. discloses an unsaturated fatty alcohol with an iodine number of between 90 and 100, using a zinc-type catalyst having a copper content. (see Example 1, (d), lines 56-62).

Weiczorek et al. fails to explicitly disclose the use as a cosmetic and derivations from various other methods and copper content of the zinc-type catalyst.

Heck et al. (932) discloses an unsaturated fatty alcohol from palm oil using a zinc-type catalyst. (see Example paragraph [0019]. Heck et al. (159) discloses an unsaturated fatty alcohol from palm nut or coconut oil using a zinc-type catalyst. (see Example paragraph [0024]). Both Heck et al. processes hydrogenate the fatty acid methyl esters from the vegetable oil (palm, palm nut & coconut).

Koehler et al. discloses the production of the fatty alcohol by hydrogenation and derivations that can be made by various methods, and use in cosmetics. (see column 5, lines 35-67 & column 6, lines 1- 34).

Masami discloses a process for producing unsaturated alcohols by hydrogenation using zinc-based catalyst with copper content of is 100 ppm or less, with Example 1 showing a copper content of 15 ppm and Example showing a copper content of 20 ppm. (see paragraph [0040] & [0044] and claims 1 and 3 of machine translation). Further, the copper content of the zinc based catalyst is configured to reduce side reactions and resolve issues such as increasing the clouding point and decreasing the iodine number when subjecting an unsaturated fatty acid or an ester thereof to a hydrogenation reaction using the zinc based catalyst. Lastly, there is nothing in the disclosure that would preclude the use of the Masami process with vegetable oil.



For the reasons set forth above, It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare unsaturated alcohol as suggested by Weiczorek et al., Heck et al. (932), and Heck et al. (159) in view of Masami, also, to use the unsaturated alcohol in use it to make derivations as suggested by Koehler et al.

Therefore, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. KSR International Co. v. Teleflex Inc., 550 U.S. \_\_\_, 82 USPQ2d 1385 (U.S. 2007).

11. Claims 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiczorek et al. (U.S. 6,187,974), Heck et al. (U.S. 2002/0037932), Heck et al. (U. S. 2002/0035159), and Koehler et al. (U.S. 5,917,097), in view of Koehler et al (U.S. 5,672,781).

Applicant claims an unsaturated alcohol. See the brief description in the 102(b) rejection. The unsaturated alcohol includes a conjugated diene compound content. Further, the rejected claim uses the product in the derivatives set out in rejected claim 13.

Weiczorek et al. discloses an unsaturated fatty alcohol with an iodine number of between 90 and 100, using a zinc-type catalyst having a copper content. (see Example 1, (d), lines 56-62).

Weiczorek et al. fails to explicitly disclose the use as a cosmetic, derivations from various other methods, and the a conjugated diene. See paragraph 10 for the disclosure of Heck et al. (932), Heck et al (159) and Koehler et al. (097).

Koehler et al. (781) discloses that it is possible to obtain a desired iodine number using distillation, and that the content of the conjugated compounds being from 3.2%, to 4.3%, but claims a conjugated compound amount less than 4.5%. (see column 3, lines 39 – 45; Example 1, 2 & 3 and claim 1).

For the reasons set forth above, It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare unsaturated alcohol as suggested by Weiczorek et al., Heck et al. (932), and Heck et al. (159) in view of Koehler et al. (791), also, to use the unsaturated alcohol in use it to make derivations as suggested by Koehler et al. (097).

Therefore, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (U.S. 2007).

12. Claims 16 - 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiczorek et al. (U.S. 6,187,974), Schmid et al (U.S. 5,276,204), Heck et al. (U.S. 2002/0037932), Heck et al. (U. S. 2002/0035159), and Koehler et al. (U.S. 5,917,097), in view of Masami (JP 2001-89403) and Koehler et al (U.S. 5,672,781).

Applicant claims an unsaturated alcohol. See the brief description in the 102(b) rejection. Further, the rejected claim uses the product in the derivatives set out in rejected claim 27.

Weiczorek et al. discloses an unsaturated fatty alcohol with an iodine number of between 90 and 100, using a zinc-type catalyst having a copper content. (see Example 1, (d), lines 56-62).

Weiczorek et al. fails to explicitly disclose reduction of a fatty acid and/or alkyl ester, the use as a cosmetic, derivations from various other methods, copper content of the zinc-type catalyst and deodorization. See paragraph 10 for the disclosure of Heck et al. (932), Heck et al (159) and Koehler et al. (097) and Masami.

Schmid et al. discloses in examples 1, discloses the feature of producing fatty alcohols from plants by hydrogenating the esters of fatty acids from the plants using zinc-based catalyst.

Koehler et al. (781) discloses that the odor can be improved by distillation. (see column 4, lines 6-10).

For the reasons set forth above, It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare unsaturated alcohol as suggested by Weiczorek et al., Schmid et al. Heck et al. (932), and Heck et al. (159) in view of Masami, deodorize the product as suggested Koehler et al (781) by also, to use the unsaturated alcohol in use it to make derivations as suggested by Koehler et al. (097)

Therefore, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (U.S. 2007).

13. Claims 30 – 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over [referred to] are rejected under 35 U.S.C. 103(a) as being unpatentable over Weiczorek et al. (U.S. 6,187,974), Schmid et al. (U.S. 5,276,204) Heck et al. (U.S. 2002/0037932), Heck et al. (U.S. 2002/0035159), and Koehler et al. (U.S. 5,917,097), in view of Masami (JP 2001-89403) and Koehler et al (U.S. 5,672,781).

Applicant claims a process for preparing an unsaturated alcohol. Further, the rejected claim teaches slightly hydrogenating the liquid vegetable unsaturated alcohol mixture.

Weiczorek et al. discloses an unsaturated fatty alcohol with an iodine number of between 90 and 100, using a zinc-type catalyst having a copper content. (see Example 1, (d), lines 56-62).

Weiczorek et al. fails to explicitly disclose the use as a cosmetic, copper catalyst, deodorization. See paragraph 10 for the disclosure of Heck et al. (932), Heck et al (159) and Koehler et al. (097) and Masami; and paragraph 12 for Koehler et al. (781) and Schmid et al.

Koehler et al (907) discloses the use of a copper catalyst. (see column 4, lines 59 - 61).

For the reasons set forth above, It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare unsaturated alcohol as suggested by Weiczorek et al., Schmid et al., Heck et al. (932), and Heck et al. (159) in view of Masami, deodorize the product as suggested Koehler et al (781).

Therefore, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (U.S. 2007).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yate' K. Cutliff whose telephone number is (571) 272-9067. The examiner can normally be reached on M-TH 8:30 a.m. - 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on (571) 272 - 0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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